

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: DONALD A. KERTH ET AL.

Filed: JULY 22, 2003

For: APPARATUS AND METHODS FOR REDUCING INTERFERENCE IN
RADIO-FREQUENCY APPARATUS

Serial No.: 10/624,456

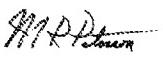
Group Art Unit: 2681

Examiner: NGUYEN, LEE

Attorney Docket: SILA:122

I hereby certify that this correspondence is being electronically or facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Date: September 5, 2006

Name: 

Commissioner for Patents
P.O. Box 1450
Alexandria 22313-1450

AMENDMENT AND RESPONSE TO OFFICE ACTION

Dear Sir:

This paper is submitted in response to the Office Action dated May 4, 2006 ("Office Action"). Concurrently with this paper, the Applicant files a request for a one-month extension of time.

AMENDMENT

Please amend the application as specified below:

In the Claims:

Please add new claims 5-20, as specified below. The current status and text of the claims follows:

1. (original) A converter in a radio-frequency (RF) apparatus, the converter comprising a feedback circuitry having a shielded input and a shielded output, wherein the shielded input and the shielded output tend to reduce interference in the converter.
2. (original) The converter according to claim 1, further comprising:
 - a first filter coupled to the shielded input of the feedback circuitry; and
 - a second filter coupled to the shielded output of the feedback circuitry.
3. (original) A method of reducing interference in a non-linear circuit in a radio-frequency (RF) apparatus, wherein the non-linear circuit has an input and an output, the method comprising:
 - shielding an input of the non-linear circuit; and
 - shielding an output of the non-linear circuit.
4. (original) The method according to claim 3, further comprising filtering an input signal supplied to the input of the non-linear circuit.
5. (new) A radio-frequency (RF) apparatus, comprising:
 - a non-linear signal-processing circuit;
 - a first shield that shields an input of the non-linear signal-processing circuit; and
 - a second shield that shields an output of the non-linear signal-processing circuit.
6. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises switched-capacitor circuitry.
7. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises noise-shaping converter circuitry.
8. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises analog-to-digital converter circuitry.

9. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises digital-to-analog converter circuitry.
10. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises multiplier circuitry.
11. (new) The apparatus according to claim 5, wherein the non-linear signal-processing circuit comprises modulator circuitry.
12. (new) The apparatus according to claim 5, further comprising:
a first filter that filters an input signal of the non-linear signal-processing circuit; and
a second filter that filters an output signal of the non-linear signal-processing circuit.
13. (new) The apparatus according to claim 5, wherein the first shield comprises a conduit, and wherein the second shield comprises a conduit.
14. (new) The apparatus according to claim 5, wherein the first shield comprises a ground plane, and the second shield comprises a ground plane.
15. (new) The converter according to claim 1, further comprising noise-shaping circuitry.
16. (new) The converter according to claim 1, further comprising analog-to-digital conversion circuitry.
17. (new) The converter according to claim 1, further comprising digital-to-analog conversion circuitry.
18. (new) The method according to claim 3, wherein shielding the input of the non-linear circuit comprises using a conduit, and wherein shielding the output of the non-linear circuit comprises using a conduit.
19. (new) The method according to claim 3, wherein shielding the input of the non-linear circuit comprises using a ground plane, and wherein shielding the output of the non-linear circuit comprises using a ground plane.

20. (new) The method according to claim 3, wherein the non-linear circuitry comprises switched-capacitor circuitry, noise-shaping converter circuitry, analog-to-digital converter circuitry, digital-to-analog converter circuitry, multiplier circuitry, or modulator circuitry.